



# technology review

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ure of the visiting ladies by a large and effective committee of Tech women of Pittsburgh, who not only extended hospitality to the women, but also assisted in helping the general committee to entertain the visitors.

The program arranged for the visiting ladies was very full and interesting. On Friday afternoon and Saturday morning those who so desired joined practically any excursion that was scheduled for the men. On Friday afternoon they were guests at the Twentieth Century Club House where tea was served. This was located only a block from the Schenley Hotel. On Friday evening, when the smoker was in progress, through the courtesy of the Carnegie Institute of Technology, all the ladies were invited to attend a performance of *Iphigenia in Tauris*, which was given by the students of the dramatic department of the School of Applied Design in the theatre of the school. On Saturday noon, through the courtesy of the University of Pittsburgh, the visiting ladies were invited to a luncheon at Schenley Hotel. On Saturday evening, they attended the banquet of the Technology Clubs Associated.

An amusing object in the reception parlor was a large bean pot flanked by two miniature coal scuttles filled with coal and decorated with the flags of all nations. This was labeled "Boston to Pittsburgh 1915" and was the offering of the New York Technology Club, brought on by its delegates.

The class luncheons were held in the large dining room of the Schenley, the tables being arranged so that classes sat together. On the first day of registration the class of '98 had the largest number of members present, but the class of '09 rolled in reinforcements on the second day and won the banner, which was presented at the banquet on Saturday evening.

The luncheon was absolutely informal. Several of the classes offered choice musical stunts and novel cheers. Professor Richards, '68, Morris Knowles, '91, and the ladies, were cheered to the echo, and "Arch" Eicher, '12, as the cheer and song leader, got out all the noise there was in the congregation.

Following the luncheon were a number of excursions to various places, competent guides and transportation being provided by the committee. During the afternoon guests continued to arrive from the four points of the compass.

The great hall at the University Club was well filled with Tech men at eight o'clock when the smoker, furnished by the Pittsburgh Association, was started. This smoker was one of the delightful features of the reunion. Probably never before have so many Tech men got into such close personal touch for a whole evening as they did on this occasion. Guests on arrival were provided with a sporty cardinal and gray baseball cap and a ration box labelled "Laboratory Supplies" to be hung by a ribbon from the shoulder, containing a pipe, tobacco, cigars, matches and a song book. As one entered the room he began to feel at home at once, for there immediately before him was a replica of the front of "chapel"—and that this was no illusion was proved by simply entering the door and making a proper investigation. The committee provided a very bountiful and delicious buffet luncheon and also a large number of special entertainers to while away the hours of the evening. Let it be said right here that these special entertainers never got a chance to materialize! The musicians provided by the committee started the singing going, and after an hour of it the delegates rolled the piano into the middle of the floor and sang until the day had long ended. During the evening a number of impromptu stunts were pulled off, among which was the initiation of prominent members of the Technology Clubs Associated into the "Order of the Little Yellow Dog."

During the evening the election of new officers of the Technology Clubs Associated was held, and the following were chosen: President, James W. Rollins, '78, of Boston; vice-presidents: Walter Large, '79, of New York; H. M. Montgomery, '79, of Chicago; E. B. Raymond, '90, of Pittsburgh; Hollis Godfrey, '98, of Philadelphia; P. W. Litchfield, '96, Akron, Ohio, and J. H. Haste, '96, of Rochester, New York. The secretary-treasurer is

Walter Humphreys, '97, of Boston. It was decided to hold the next meeting of the clubs in Boston in June, 1916.

I. W. Litchfield, '85, on behalf of the Rand Memorial Committee, stated that the response to the committee's appeal had been about one-third of what was expected, and Harry A. Rapelye, '08, associate secretary of the Technology Clubs Associated, and secretary of the Pittsburgh Association, was made a committee



Morris Knowles, '91  
President of the Technology Clubs Associated

of one to receive contributions from those who desire to help increase the fund.

Saturday morning was taken up with excursions to various points of interest. A number of men who had been unable to come on Friday, registered during the morning.

The course luncheons, which were held Saturday noon, were of unusual interest. Six groups met in as many places at the University Club and Hotel Schenley, at which constructive criticism of the courses was the distinctive feature. Each course

was represented by a Faculty representative, and the committee in charge of the course luncheons had worked out the plan so well that the desired object was fully realized. The real value of these suggestions was due to the fact that the speakers had carefully studied the catalogue and had secured correct information so that they were conversant with the conduct of the courses. A member of the committee presided at each group and called on two or three men for short talks bearing on the course he represented. In many cases the Faculty representative was able to show that a number of the suggestions had already been considered. Many of the suggestions were welcomed as of direct benefit to the department and such of them as can be used will be put into effect. The professors who attended these meetings have expressed themselves as highly pleased and benefited by the discussion. In other words, the committee, in adopting this new feature, accomplished exactly what they desired to accomplish in a sympathetic constructive way. In subsequent issues of the REVIEW some of these matters will be taken up, as opportunity is not afforded here.

At the Course II luncheon and at two other luncheons suggestions were made which are likely to have an important influence. At the Course II luncheon, Charles F. F. Campbell, '01, secretary of the Ohio State Commission for the Blind and editor of the *Outlook for the Blind*, urged that every student be given at least a survey of the modern methods which are being used in all the best-organized industries to conserve the health and happiness and efficiency of employees. If boards of directors paid half as much attention, said he, to the condition of their employees that they do to the condition of their machines, the returns in happiness could not be measured, to say nothing of the vastly increased returns in dividends. His plea was not entirely from a philanthropic standpoint but was based on simple business laws. We were taught at Technology to study material and machinery with a view of securing the very best results for the purposes desired, but we give no particular thought or attention to the human

element that forms the greater part of the investment. Men should be examined with reference to their intelligence and eye-sight and their physical condition, and all of these could be improved in the working force of every factory to the great advantage of the employer. He spoke of a number of concerns that were going into this question in one way or another, and his suggestions seemed so pertinent that a committee of three, consisting of Charles F. F. Campbell, '01, A. T. Hopkins, '97, of the Mechanical Rubber Company of Cleveland, Ohio; P. W. Litchfield, '96, of the Goodyear Rubber Company of Akron, Ohio, was appointed to investigate this matter and present its findings to the Alumni Council of the Alumni Association.

The course luncheons were so interesting that some of the sessions continued until nearly five o'clock.

The banquet in the evening was the crowning feature of the convention. It was held in the large dining room of Hotel Schenley, which was beautifully decorated. The guests were seated by classes; and one could find immediately the location of any of the guests from the seating directory which was found at each place. Music was furnished by the Greater Pittsburgh Quartet, which was reënforced during the evening by some choice female voices and rendered the "Sextette from Lucia," which brought forth a perfect storm of applause.

Just before the speeches the room was darkened and a number of slides showing the progress that is being made on the new buildings were shown on the screen. Unfortunately there was not opportunity to properly describe the pictures in the limited time available.

After dinner, President Morris Knowles announced that the long-distance cup, which is annually given to the delegate coming the greatest distance, was awarded to C. W. Goodale, '75, manager of the Boston and Montana Department of the Anaconda Copper and Silver Company, Butte, Montana. In receiving the trophy, Mr. Goodale made a happy speech in which he presented the felicitations of the Technology Club of Montana. The ban-

ner for the largest class attendance was awarded to the class of 1909. President Knowles then presented a beautiful bouquet of flowers to Professor Robert H. Richards, '68, with congratulations on the conclusion of fifty years of connection with the Institute of Technology. Mr. Knowles then introduced C. S. Robinson, '84, of Youngstown, Ohio, president of the Pittsburgh Association, as toastmaster of the evening. Mr. Robinson made a happy allusion to the presence of so many ladies and then called on Dr. John A. Brashear, president of the American Society of Mechanical Engineers.

It is, indeed, a great pleasure for me to be with you on this occasion, and particularly so because of the presence of your ladies and that of your good President, for whom I have a very great affection, indeed, since I know that, while he has devoted his splendid energies to science in its larger aspects, as well as to the development of your Alma Mater, he has not forgotten the wayfaring man—he who would know some of the beautiful things in science, but who has had no such opportunities within his grasp as you good fellows have had who are alumni of the M. I. T.

I am the fortunate possessor of a copy of his lectures on "Light," with a most beautiful inscription on the fly-leaf by its author, that I prize beyond measure, and I can imagine how his hearers in the American Museum of Natural History would appreciate the story he brought within the comprehension of those earnest plodders in his audience. I have loved the man ever since I read his book.

I was one of the guests of the British Association for the Advancement of Science at their meeting in Toronto in 1899. May I tell you an incident that occurred at one of the convocations which made an impression upon my mind that I shall never forget? The degree of doctor of laws was to be conferred upon Lord Lister who, you all know, was the discoverer of the antiseptic method of treating wounds. There were many notables present, among them Lord and Lady Aberdeen, Lord Kelvin, Ramsey, Rutherford, and a host of others. When the degree had been presented to Lister by Dr. Louden, president of the University of Toronto, the dear old man in his kindly way responded, "I do not know why the world has conferred so many honors upon me. I appreciate them all, I assure you, none the less this new honor that comes from your university, but"—and here the great soul, a veritable picture of manhood, hesitated a moment, and then said, "If I have done aught in my life's work to assuage human suffering, I am better repaid than by all the degrees that can be conferred upon me."

There was dead silence for a moment; then a burst of applause came from that vast audience, giving evidence of what those words meant.

And now for the application of this story: Nine years ago the death-rate in our city from typhoid fever was 130 per hundred thousand, and eight years

ago, in 1907, it was 125 per hundred thousand. This appalling death-rate caused the officials of our city to ask the question, "Why is it, and can it be prevented?" To their honor, they called one of the graduates of your splendid institution, Mr. Allen Hazen, by whose splendid engineering skill the problem of our present filtration system was devised, and then to carry it out practically, another graduate of the M. I. T., who is your president tonight, our dear friend Morris Knowles, was selected. These men, with their associates, did their work so well that the record for the year following the completion of the filtration plant, in 1908, shows the death-rate to have been reduced to 48.7 to one hundred thousand persons. In 1909 it had been reduced to 24.6, and in 1912, by the use of calcium hypochlorite, the rate had been again reduced 100 per cent, so that the death-rate was 12.7 as compared with 130.3 in 1906. I am sure you will now say that the application of my story of Lord Lister is well put. The death-rate for last year was but 15.2 to one hundred thousand inhabitants. It is needless to say that these two splendid men are only types of the men who have graduated from the M. I. T. With some of them I have been associated almost since childhood, and I need only to speak of the magnificent work of Dr. George Ellery Hale, who perhaps, with his associates, has accomplished more by his astrophysical researches than any investigator in his line, and he is still a young man.

Pittsburgh has been credited, in the pamphlet that has been laid before you, with great progress in industrial art; much of it is due to the university men who have come into our midst, and from Massachusetts Institute there are many of whom we are very proud. Twenty-five years ago there were very few university men associated with our industries; I am sure I am not overestimating when I say there are now over eight thousand of such men connected with our various industries at the present time, and they have made good.

As to my own association with the men whose investigations and discoveries have been epoch-making in the history of our good city, in the brief time at my command I can only speak of a few. My dear friend, Professor Langley, was the first to take up the question of standard time for the railroads, although a few desultory signals had been sent from the United States Naval Observatory. Professor Langley took up the work in his characteristic and thorough manner and, coming from Harvard to our city, we are glad to record that so close an associate to your institution in his life work brought about standardization of time into the railroad system, for in 1870 nearly six thousand miles of railroad received the time signals from the Allegheny Observatory, and in our institution we are proud to say that the time service has been so effective that the mean error of last year's signals was only thirty-two hundredths of a second.

The investigations of Professor Langley at the old observatory, and continued at the Smithsonian Institute, in his study of the why of organic life upon the earth, through discoveries made with the spectro-bolometer and rock salt trains, our city may well be proud of—not only because of Langley's great work, but because a citizen of Pittsburgh, well known in the earlier days of research, enabled Lang-

ley and Keeler to make these wonderful contributions to science.

It is no doubt well known to each one of those who listen to me that at the Allegheny Observatory, Langley's studies of aviation, with particular reference to the heavier-than-air machines, were made, and I believe the world today gives him very great credit for these masterly pioneer studies.

Pittsburgh is also happy in having an endowment of one quarter of a million dollars for the benefit and betterment of teaching in its public schools. This endowment, given by a private citizen, has enabled the Educational Fund Commission to send over six hundred teachers to universities for their summer studies in the last five years, and the good work is going on.



W. E. Mott, '89  
Past President of the Pittsburgh Association

Great benefit has come to us and our good friend Superintendent Davidson, at the head of the public schools, tells us he has found no such inspiration in any body of teachers with which he has been associated.

It would be almost invidious for me to tell you of the marvelous work in mechanical and commercial lines for human betterment and safety as was brought about by the investigations of my dear personal friend, George Westinghouse. The world knows of his great work developed here in the city of Pittsburgh, with its innumerable phases and its splendid results. Some of your men have helped in this great scheme and all credit is due them.

It would savor of the ego for me to say anything of our connection with the astronomical, astro-

physical and astrophotographic developments in our own special line during the last thirty years, so I will leave that story for others to tell, but inasmuch as the limit of my time has been reached, I am only going to add one other thing of which Pittsburgh can be proud. Its citizens have given the money for a magnificent observatory and equipment in memory of the great men who have been associated in former years with it, and one department has been arranged and forever dedicated to the use of the people. During the past five years fourteen thousand five hundred persons have enjoyed the beauties of the skies—a privilege which would not have been theirs had this department of the observatory not been opened to them, and may I hope to see the day when every city in the United States will have such an institution, free to the people, as they have their libraries, their art institutions, and their museums. And let me say a final word to this splendid association; that is, not only is it your place in the world's work to be great engineers or great technical men in any line, but it is your privilege to give some of the knowledge that you have received to the layman, to the struggling amateur, to every one whose opportunities have been limited, for in doing this you can carry blessings with you and make the world better for your living in it. Take the motto that has helped me in my work, given me by my good friend, Capt. Jack Crawford, the scout poet:

"When a bit of sunshine hits ye,  
After passing of a cloud,  
When a bit of laughter gits ye  
An' yer spine is feelin' proud,  
Don't forget to up and fling it  
At a soul that's feelin' blue,  
For the minit that ye sling it  
It's a boomerang to you."

Toastmaster Robinson next introduced Dr. Richard C. Maclaurin, president of the Institute, who spoke as follows:

It is peculiarly stimulating to address a gathering such as this on the 20th of February—a day memorable in the annals of Technology. It was exactly fifty years ago today on the 20th of February 1865 that the preliminary course at Technology was open and Rogers entered in his diary "Organized the School! Fifteen students entered. May not this prove a memorable day!" His wishes and hopes have been abundantly fulfilled for the day indeed proved a memorable one. It is wonderful to contemplate what has been accomplished in the fifty years that have intervened, beginning with the frailty of infancy and little more than hope and reaching forth into the vigor and power that have come from years of great achievement. At the half-way mark of twenty-five years Lowell could say of Technology that it was "preëminently a leader in education." Its methods had affected education generally and profoundly changed the current of educational progress. Beginning with these fifteen students "picked up" from the neighborhood of Boston as some have said, and "compelled in" as others have indicated, it has now over 1,800 men from all parts of the world drawn by the

attractive power of its reputation. Great indeed in these fifty years have been the Institute's contributions to the advancement of science and to the application of scientific methods to practical problems and great have been the achievements of its alumni who for long have been found everywhere in positions of power and responsibility and everywhere commanding respect.

Very striking is the contrast between the circumstances of Technology today and those of fifty years ago, but there are some equally striking resemblances, some trifling, others of grave moment. Let us look at a few of them. Fifty years ago this country was in the midst of the great war—the greatest in its history—a war that involved great moral and economic issues that have vitally affected it ever since. Today we are witnessing a war on a far vaster scale involving moral and economic issues even more momentous. The clearing of the issues in the Civil War opened the way for material advancement and gave applied science its opportunity. There is no reason to suppose that history will not repeat itself in this respect. The present war is doubtless a terrible evil, more terrible than it seemed possible even to imagine, but it will not have proved an unmixed evil if it settles the fundamental moral issues that it raises; and whether it do this or not it will inevitably present a unique opportunity to this country for *relative* advancement. It is true, of course, as the war has already taught us, that the world is so bound together that to a certain extent one part must suffer with the rest. But on the economic side, this suffering on the part of America should prove but temporary. Looking ahead a little we can scarcely fail to see a great hope for this country. The exhaustion of the resources of Europe must put us *relatively* forward, and if we can take advantage of our opportunity we should be able to keep ahead for long if not indefinitely. Whether we can do this or not must depend on our trained intelligence, and we will surely fail unless we can apply the scientific method and spirit to every phase of the great problem. It seems to me that there was never a time in the history of America when it was so important that its schools of applied science should be the strongest in the world. We need them thus strong to train the rising generation to rise to the level of its opportunity and having put the country well in the forefront of economic advancement to keep it there.

As I have said, we must have our schools of applied science strong and of course I need not tell you that the strongest of all must be the good old M. I. T. It has been growing steadily in power and influence and in material resources for the last fifty years and it has grown in these respects with unwonted rapidity of late. Everything that has happened to it recently should give it greater stability and greater strength, not the least powerful of the strengthening forces being its alliance with Harvard. Having regard to its historic setting Harvard University is certainly the greatest in this country. An alliance with such an institution, on such terms as have actually been arranged, can scarcely fail to prove beneficial on other grounds than the mere increase of financial resources, important as that is and greatly as it is needed. The terms of the alliance were arranged so as to safe-

guard the independence of each institution and avoid the difficulties of dual control. They could not have been arranged as they have except for the mutual confidence of the two institutions. Since the agreement was entered into a question has been raised as to whether certain of its terms are in accordance with some of the trusts committed to the University. This question had, of course, been carefully considered before the agreement was made and the parties had been advised by the most eminent counsel, ex-Secretary of State Olney and others, that the plan contemplated was perfectly in accordance with all the trusts involved. In view, however, of doubts that have been expressed, Harvard University has decided to ask the court for instructions in the matter. We have no reason to anticipate an unfavorable decision, but it would be of doubtful propriety on my part to discuss the legalities of the case while the matter is still unsettled authoritatively. I can say, however, that as time goes on, the advantages of the alliance grow more apparent. In so far as it has been tested during the present year it has worked smoothly and well. Such difficulties as loomed large to the vision of some have proved entirely imaginary. The plan will effect an enormous saving of energy and money, and if the war is teaching us anything it is enforcing the absolute necessity of conserving such resources as we have and avoiding needless waste.

I have spoken of the parallels between the conditions at Technology today and those of fifty years ago. The Institute's authorities were then in the throes of building. The Faculty today has experienced something of the birth pains of the new Technology and the President has not wholly escaped trouble and anxiety in the matter. There can, however, be no doubt as to the result. The Rogers Building has proved an ornament to Boston, and as the New Technology arises, it is plain that it will form one of the most notable educational groups of America, magnificent in its setting and worthy of that setting. The Rogers Building took rather longer to erect than had been expected. It was begun in 1864, fifty years before the New Technology. It was to have been ready for occupancy in 1865, fifty years before 1915, when it seemed at one time that the new Tech might be ready. As a matter of fact the Rogers Building was not occupied until 1866, and fifty years from that time, in 1916, we shall surely enter our new buildings unless the sky fall or something equally unexpected happen.

I am glad to say that in one important particular the parallel between the events of fifty years ago and those of today is not complete. The Rogers Building proved much more expensive than had been estimated. Happily, the cost of our construction work, so far as it has gone, is well within the figures of the Stone and Webster Engineering Corporation who are the Construction Engineers.

At the same time, the parallel holds as regards the faith in Technology necessary to carry out the venture of building and to a certain extent as regards the courage needed on the part of the responsible officers. I do not suggest that the Executive Committee today needs more than a small fraction of the courage of those that supported Rogers. His courage and theirs was sublime, for all seemed against them. Today, we have countless things

in our favor, but still the fact remains that the financial responsibility is a serious one. Money comes hardly in these troublous times, and the project on which we are embarked is so extensive that it inevitably costs many millions to do it right and of course it must be done right, no other way can be thought of. We must trust in the future and go forward with full faith in Technology, determined to have an equipment as good as it is possible to get, just as Rogers was determined in the dark days of fifty years ago.

We have received great encouragement and support, but there is much yet to be done that is still unprovided for. The alumni have come forward most handsomely and perhaps under present cir-



C. S. Robinson, '84  
New President of the Pittsburgh Association

circumstances they have done all that they can, but when the time does come, as it surely will, when you take up something new, it would seem to me well to concentrate your effort on a single project and finish it. If I had to select such a project today, I would suggest the completion of the Walker Memorial Gymnasium, for one reason, because we have already a considerable fund for that purpose and it would not require an enormous sum to clean the matter up. More important than that, however, is the fact that if we had the Walker Memorial with a gymnasium, a Memorial that contained rooms that could be used temporarily for Commons, we should have a complete outfit with everything necessary for our life at the New Technology. Dormitories would have to come later (of course, the sooner the better),

but having progressed without them for so long we can exercise a little patience yet. More elaborate arrangements for Commons and gymnasium could also be made later when there was less new development to tax our resources.

Ours surely is a great cause that cannot fail to prevail. It is the cause of applied science—a cause that more and more must mean commercial and industrial prosperity to the country. It is no local cause but a nation-wide one, the cause of a national institution working not for Massachusetts alone but for the country as a whole. It is the cause of the "Dear Old M. I. T.," now so clearly coming into her own and bound to grow more and more in power and influence as she steadfastly maintains her course and keeps ever in the lead.

Professor Wallace C. Sabine of Harvard University, representing President Lowell, was the next speaker. He said that he brought the greetings of Harvard and wished to express the great interest of the university in the Institute of Technology. The question as to whether the coöperative agreement was an advantage or disadvantage to the university had been placed far in the background. At first the matter of coöperation met with some opposition. It had gone into effect, however, with less hardship than was anticipated. The Harvard professors had looked forward to this with a feeling that there might be some loss of ideals. They looked forward to it courageously and hopefully, however, and had found the difficulties less and the pleasure greater than they had anticipated. The welcome extended to them was complete. The speaker did not doubt that there were similar feelings on the part of Technology professors. He said that there was complete confidence in the officers and Faculty of the Institute and that Harvard looked forward to contributing not only to the letter but to the spirit of the agreement. The new members of the Institute Faculty coming from Harvard were supporting it earnestly and loyally. More than that they could not do.

The next speaker was Henry M. Waite, '90, city manager of Dayton, Ohio. Mr. Waite said:

The engineering profession, for the purposes of this paper, may be divided into two classes, the designer and the practician—the theorist and the administrative. At the beginning of their careers both have practically the same fundamentals. The separation takes place when the natural tendencies

of the individual are developed with opportunity. Too long employment in one class makes successful employment in the other unlikely.

In our municipal governments there is the opportunity for both of these classes of engineers today. It has not been a tempting field in the past due to its uncertainty under political control. Civil service is doing much to give it stability.

Our municipalities are growing so rapidly that the best engineering talent available is being used in planning water works, sewage systems and grade elimination. The problems are large enough to attract the engineer of ability, and he will become more interested as he appreciates that such positions have been made more stable. Still more important is the



H. A. Rapleye, '08  
Secretary of the Pittsburgh Association

fact that at the present every development in municipal work makes for greater possibilities. The fact alone that cities need and must have good engineers creates the field for the creative class.

In addition, cities are realizing more and more the advantages to be derived in having engineers of the administrative class as heads of street repair, street-cleaning, parks and other departments. In this work, modern methods and proper accounting and cost data make the possibilities for economies enormous.

A new field for the administrative class of engineers is now opening. The American people have long realized that their cities were misgoverned. Mr. Bryce, probably, was the first person to call it to our attention forcibly. He had our respect al-

ways, and when he so clearly proved what we already knew, our pride was touched. From that time we have been working constructively towards better government.

We had always assumed that our troubles were caused by the individuals who governed us. The real trouble lay in the fact that our form of government was so bad we could not get the proper kind of individual to govern us continuously. When we did get good individuals, the system was so complex that they could not procure the expected results. Many a good man has become permanently unpopular, or even worse, for trying the experiment.

Various new forms of municipal government have been, and are being, tried. The modified federal and the commission, now the commission-manager form, seems to have the greatest popularity in the American mind. The reason seems simple. The modified federal and the commission forms depend on the people being able to select by the ballot the proper man for a particular function of government.

This is not practicable. Even if it was, we do not want to have our government administered by people who owe their position to a certain constituency. It is human nature to be grateful. It is human nature to pay debts. An organization made up of debtpaid individuals is the death knell of efficiency.

The commission-manager form is the application of our successful business organizations to the running of a city. It is called the German System—It is better than the German System. The people elect a commission (Board of Directors), they select the manager, who is responsible for the administrative end and who has no political debts to pay.

I do not know today the political faith of many of the commissioners, nor of any of the men I have appointed.

The interest in this form is to ascertain whether or not it is possible to apply business methods in the running of a city. After an experience of one year we are free to say that it is possible. The next grave question is: Will the people continue to be interested in it and keep politics out of it? It is for the people to answer.

It is the commission-manager form of government that is opening up a new field for the administrative class of engineers. Not that the city manager must be an engineer, but the entire municipal field is opening up a training ground for the engineer to become the city manager.

Colleges are considering the municipal field in their curriculums. Ann Arbor has a course for city managers. Education can help, but cannot any more make a successful city manager than it can any other class. He must have municipal experience. Cities today looking for city managers are demanding municipal experience. Last month Jackson, Michigan, took for its city manager the city manager of Big Rapids, Michigan, giving him a substantial increase in salary.

It is true that this particular form of government is in its pioneer days. It has many serious problems ahead of it. You cannot proceed as rapidly as in a private or corporate business. You are hampered by old customs and red tape laws, and by an unintelligent public. You can only progress as rapidly as you can educate the people to go. They must be

with you. Your publicity should have your people slightly ahead of you. You cannot be fooled by the fact that some are traveling along with you. Some are slower to grasp the benefits they are deriving than others.

Many are loath to give up the old ward representative, who always had his ear to the ground and would listen to complaints of holes in a sidewalk and promise immediate relief and repair. He was at all the weddings, funerals and christenings in his ward.

Our government is cold and scientific. The people must be educated to the fact that efficiency and economy are more valuable than the ward politician's salve.

We are pioneering. We are blazing the trail. We are hitting the high points in constructive work. We are cutting out the big trees for the first log cabin. Later the reformers (the polishers) will put on the finishing touches, clean out the stumps and cultivate the fields.

If the engineer desires to get into this opening and take advantage of this new territory, which is rightfully his, there is going to be, to my mind, a wonderfully interesting field. I think it is the opening of a new field for him, and I believe the beginning of a new era for the government of municipalities.

In introducing Mr. Horace F. Baker, president of the Harvard Club of Western Pennsylvania, Mr. Robinson alluded to his own position as the recently elected president of the Pittsburgh Technology Club and a resident of Youngstown, Ohio, and to the fact that the president of the Harvard Club of Western Pennsylvania was also a resident of the same place. He said he thought it was significant of the habit of the country at large to select its presidents from Ohio.

Mr. Baker brought with him the felicitations of the Harvard men of Western Pennsylvania to their brethren of Technology. In regard to the coöperative agreement between the Institute and Harvard University he said that the strength and position of an educational institution and the influence which it may exert in the community where it operates may be accurately measured by the force of the alumni. An institution that has the active support of alumni who will take off their coats to help it put its projects into successful operation, has enormous power at its command. The new coöperative agreement, in his opinion, depended greatly on how the alumni of these two institutions regarded it.

Mr. Henry J. Horn, '88, president of



Smoker at Pittsburgh

the M. I. T. Alumni Association, was the last speaker. He said: "It is only a year ago when at the alumni banquet in Boston the governor of Massachusetts suggested coöperation between the Institute and the Commonwealth, and within the year a valuable report has been made and adopted and last month there was formed the Massachusetts University Council, which means coöperation between all the higher institutions of learning and the state."

Last week Mr. Horn attended a meeting of the M. I. T. dormitory committee, the purpose of which is to work out the most practical way in which to house the students of Technology when it shall be moved next year to the bank of the Charles. He told how the representatives of the fraternities viewed the question, sinking selfish individual considerations for the benefit of the whole. "Imagine," he said, "representatives of twenty fraternities gathered in truly fraternal fashion to discuss the common good of a single proposition uppermost in all their minds."

The speaker referred next to the co-

operation begun when Messrs. King and Hurd of the New York Association came to Boston asking the alumni to help in the association of Technology clubs. "This meeting is the third of that federation and the progress is evident when one glances about at this Pittsburgh meeting." Then Mr. Horn referred to the work of the Alumni Council in Boston which considers many matters of policy and advancement, setting its committees to work in engineering fashion viewing the subject from all points of view. Last year in the Council two hundred individuals gave of their time, energies and judgment to secure accurate conclusions for Technology. "Organized coöperation of our kind," said Mr. Horn in conclusion, "stands for increased efficiency, production of the highest type, reduction in waste and aims to be a real help not only for governments but for all the countless enterprises and industries worthy of intelligent attention. Nearly every kind of organization save that such as ours has wielded its influence in business and in government in this country. Think well, then, men of Technology what may be

your influence in the new kind of coöperation where education gives of its best for Government."

At each place was a song book, and the audience joined heartily in singing Tech songs throughout the dinner. There were 251 guests, but probably the registration was a little greater than this number.

Those sitting at the head table were: Dr. W. J. Holland, director of the Carnegie Institute Museum; James W. Rollins, '78, president of the Technology Clubs Associated for 1916; Julian Kennedy, engineer, Pittsburgh; S. B. Ely, '92, chairman of the hospitality committee; Henry M. Waite, '90, city manager of Dayton, Ohio; W. E. Mott, '89, past president of the Pittsburgh Alumni Association; Henry J. Horn, '88, president of the M. I. T. Alumni Association; Morris Knowles, '91, president of the Technology Clubs Associated for 1915; Richard C. MacLaurin, president of the Massachusetts Institute of Technology; C. S. Robinson, '94, toastmaster; John A. Brashear, president of the American Society of Mechanical Engineers; Wallace C. Sabine, professor at Harvard University; Horace F. Baker, president of the Harvard Club of Western Pennsylvania; S. B. McCormick, chancellor of the University of Pittsburgh; I. W. Litchfield, '85, field manager of the Alumni Association; Arthur Hammerschlag, director of the Carnegie Institute of Technology; W. M. Davidson, superintendent of the Pittsburgh schools.

### A Movement Worthy of Extension

At the last meeting of the Technology Club of Albany and Schenectady, a plan was adopted for coöperating with the educational authorities in the two cities by detailing several members of the club to give popular lectures on engineering subjects.

In accordance with this movement four public lectures have been given under the auspices of the Technology Club of Albany by members of the club.

The announcement by the State Department of Education stated that a course of free public lectures would be

given by the Technology Club of Albany in coöperation with the State Department of Education, in the Education Building at Albany, as follows: February 9, "The State Highways," by George A. Ricker, '86, First Deputy, State Department of Highways; February 16, "The Dams of the State," by Alexander Rice McKim, '86, State Inspector of Docks and Dams; February 23, "Public Health," by Theodore Horton, '94, Chief Engineer, State Department of Health; March 2, "The State Barge Canal," by Frank M. Williams, State Engineer and Surveyor.

This movement for the public benefit on the part of the club is indicative of what Tech clubs can do everywhere, if not in connection with the State, in connection with the municipalities. In other large Tech centers there are specialists who are particularly qualified to help in public education on similar important subjects, and it is hoped that the movement started by the Albany club will spread all over the United States.

### Activity at Cincinnati

There was an election of officers at the last meeting of the Cincinnati Technology Club, held at Mechlenburg's restaurant, January 23, with the following result: President, R. W. Proctor, '94; vice-president, John Hargrave, '12; secretary, Edward H. Kruckemeyer, '11; treasurer, Charles R. Strong, '11; executive committee: Stuart R. Miller, '07, H. S. Morse, '03, J. H. Feemster, Jr., '06.

The lantern slides, showing the new Technology buildings, which were shown after dinner, excited great interest. Tech songs played an important part in the evening's entertainment and afterwards everybody enjoyed bowling, where Capt. Hermann W. Lackman's ('05) team captured the highest honors, and Walter L. Rapp, '00, won the cup donated by the retiring president, Stanley A. Hooker, '97.

The weekly luncheons at the Bismarck still continue, and Tech men from all over the country have formed the excellent habit of dropping in when in Cincinnati.

### Relative to the New Agreement

In his annual report, recently published, President Lowell of Harvard University speaks of the agreement with Technology as follows:—

"In the last annual report the agreement with the Massachusetts Institute of Technology was described and discussed at some length. The text of the agreement itself was set forth in an appendix, and is printed again in the report of Dean Sabine. According to its terms it does not go into effect until the new buildings of the Institute, now in the process of construction in Cambridge, shall be ready for use; but in the meanwhile the two institutions are coöperating so far as possible for instruction in the subjects covered by the plan, and members of the various departments concerned are working together cordially. They realize fully the benefits that will accrue, and that the practical problems involved can readily be solved. Some friends of the University, however, have grave doubts whether the agreement is in accord with the provisions of Gordon McKay's will. It is needless to say that, great as the gain to the public may be, neither the corporation nor the board of overseers would have made the agreement if they had not believed, and been advised by their counsel, that they had full authority to do so. But, in view of the questions that have been raised, the corporation is determined to seek the opinion of the Supreme Court of the Commonwealth in order to set all doubts at rest. Under these conditions it would be unbecoming to argue here the necessity, propriety and legality of combinations between educational institutions, or the nature of the particular provisions in the will of Gordon McKay.

"People have asked what will be the relation of the undergraduate in Harvard College to the new combination. For some years technical courses in engineering and mining have not been open to undergraduates in the college. The Graduate School of Applied Science has been in reality a graduate school, and the non-technical courses denominated engineering have dealt almost entirely with mathematics,

physics, mechanics, chemistry, drawing and other subjects that lie at the foundation of engineering or mining, but are believed to be valuable to any man as a proper part of a general education. These courses remain in Harvard College, open to all undergraduates competent to pursue them. It may be observed, however, that the first two years in the Institute of Technology are devoted almost wholly to courses of this nature, together with others of a still more general character, such as English, history and modern languages. Scientific courses of the same kind are offered in most colleges today, so that a graduate of any good college who has taken them there can enter the Institute with advanced standing, and, if he has sufficient capacity, complete the work for his degree in two years. When the new combination goes fully into effect, therefore, a man aiming at the Harvard and Technology degrees in engineering or mining can follow any one of three paths. He can enter the Institute at once and take these degrees in four years. He can enter Harvard College, spend a couple of years taking the preliminary sciences there, then leave the college and take up the technical work at the Institute, having the status of a professional student in the Institute and the University; and, if he has ability enough, obtain the degree in two more years. Or, lastly, he can continue in Harvard College, taking his degree there in three or four years, and then do the technical engineering work at the Institute in the same way. This last is the only way in which a student has been able of late to obtain an engineering degree at Harvard, the only difference being that hitherto his technical studies after leaving college have been pursued at the Graduate School of Applied Science, whereas by the new agreement they will be pursued at the Institute under the combined instruction. It will be observed that the position of the undergraduate in Harvard College is not directly affected by the combination, save that he is enabled to obtain an engineering degree from the University without completing his college course, if he so desires. This statement seems needed to correct misapprehensions that have arisen."

## STUDENT BUILDINGS THE THEME

### Council meeting discusses dormitories, Walker Memorial and Fraternity Houses—Committee reports progress

The monthly meeting of the Alumni Council, which was held at the Engineers' Club March 1, was one of the best attended and the most interesting meetings in its history.

The principal feature of the evening was the report of the committee appointed to investigate the dormitory question, but the discussion included the Walker Memorial, eating facilities and gymnasium, as well.

During the salad course I. W. Litchfield, '85, field manager, reported on his recent trip to Philadelphia where a new and strong activity has been started in the local association, and to Washington, where the alumni are now considering the possibility of a Tech house where the younger men can find suitable accommodations and which can be used as a rendezvous or a sort of Technology club by the Tech men of Washington. He also spoke briefly of the Pittsburgh reunion and of the alumni meetings which he attended at Cincinnati, Dayton and Detroit. His report showed that the places visited were strong centers of Tech interest and enthusiasm, and that plans for the future indicate a still more efficient organization.

James P. Munroe, '82, chairman of the committee recently appointed to investigate and report on the question of dormitories said that his report would have to be one of progress. The Institute has no money that it can take from its building fund for dormitories. When the educational buildings are completed in 1916, there must be eating facilities for two thousand students at the mid-day meal, and there should be a Walker Memorial where the students can meet for study and recreation between lectures.

The Walker Memorial fund now amounts to \$150,000. This fund was completed several years ago and is beginning to be a little stale. The subscribers are

asking for something to show for their contributions. We must provide for five or six hundred non-fraternity men, either on the grounds or somewhere else. He further stated that three or four hundred fraternity men now in fraternity houses are very much in the dark as regards the future, and are very much interested to know what accommodations will be offered on the new site. Some own their own houses and some rent them. One of these fraternities has recently built, and others have either bought or bonded land. They are all in a state of uncertainty as to what will be offered them.

A gymnasium must be provided for compulsory work required by the Faculty, and that must be ready when the new buildings are opened to students. The situation, he said, was certainly very complicated.

A meeting of about fifteen fraternity representatives was held a few weeks ago, and there was a full and frank discussion of the whole matter. The fraternities will be glad to coöperate in any reasonable dormitory scheme. They will insist, however, upon having their own dining-room, kitchen and lounging-room. They also stipulate that the cost of maintaining a fraternity on the site should not exceed present expenditures.

Let us suppose, said Mr. Munroe, that there can be advanced \$250,000 from Institute funds, with the understanding that \$250,000 more be raised among interested alumni on debenture bonds, or notes to be guaranteed by the Institute. This will give a fund of \$500,000. Two hundred thousand dollars, say, could be devoted to the "Commons," and the balance could be put into dormitories. There has been no question of the superior advantages of the stairway system proposed by the Bemis committee.

The amount suggested above for dor-

mitories will take care of 200 or 250 non-fraternity men, and say four or five fraternities. It is reasonable to count on these fraternities to raise one-half of the sum needed for building the dormitories which they themselves will occupy.

In clearing up the uncertainties connected with this whole matter the speaker thought that the first thing to do would be to find out the cost just as closely as possible; in the second place to find out how far the Institute can stand back of the scheme, and third, the practicability of the Institute's running the restaurant without losing too much money. He said that after varied discussions the committee was of one mind—that the only feasible plan under present circumstances was to combine the "Commons," Walker Memorial and gymnasium into one building. This would be a temporary measure just to begin with. It will be possible to temporarily sacrifice some of the rooms used for club meetings for eating purposes and to work in the gymnasium in the place of some other feature of the Walker Memorial. Under this plan part of the \$200,000 suggested for the "Commons" could be put with the \$150,000 now raised by the Walker Memorial committee, and have a sufficient amount to start on the dormitories.

The plan suggested by the Bemis committee was to put up one unit at a time, and after this has been tried out satisfactorily, another unit could be built. Mr. Munroe said that he believed the alumni were thoroughly interested in this dormitory proposition, and if we can devise a business-like plan for financing it, we can depend on the alumni to carry it through.

The object of making this report of progress and these tentative suggestions was to present to the Council the general ideas of the committee and get their opinion before going further.

President Horn then called on Francis R. Hart, '89, treasurer of the Institute. Mr. Hart said that the interest of the Executive Committee in provision for dormitories and other students' facilities was very keen. He thought, however, that it would be well to first consider the relative importance of the buildings out-

side of those in the academic group. In the order of their importance Mr. Hart classed them as follows: First, facilities for noon-day luncheon; next in importance would be a meeting place for the students analogous to the present union, and some sort of gymnasium. The armory across the Massachusetts avenue from the site can be used as a drill hall. These things, he said, we must have and are absolute necessities. The dormitories are almost a necessity, and every one of us will be disappointed if they are not ready when we move over to Cambridge. From another point of view, however, the dormitories can better wait than the other items enumerated. The Union with its lunch-room, and the gymnasium, we now have, and it would be extremely difficult to get along without them if only for that reason alone. Postponement of erecting the dormitories, while unfortunate, would mean that we would be giving up something we have never had. In his mind it was obvious that the students must have a place to eat at noon, and there must be provision for compulsory gymnasium work, now required by the Faculty. Off hand, Mr. Munroe has made a suggestion by means of which it might be possible for the Institute to provide for those things which are necessary at first,—with the other things brought into the perspective. The donors of the Walker Memorial fund might object to see these other features—that is, lunch-room and gymnasium—jected into it. Presuming that the cost of the Walker Memorial be \$250,000—\$100,000 more would have to be raised. With this sum it might be possible to include the lunch-room and a skeleton gymnasium, temporarily, in the Walker Memorial. Later these could be removed, and the interior arrangements changed to carry out the original idea. If the necessary things could thus be taken care of for the time being, we could proceed with a clearer view of the whole matter.

In regard to the possible coöperation of the Institute in any scheme of financing the dormitories, Mr. Hart said that he spoke as guardian of the treasury. It would be a great misfortune if, after the

dormitories were built, it was found that the securities representing the money invested should not be income bearing. There were but two ways in his opinion to build the dormitories—either by gifts outright, or as a matter of business, pure and simple. If in working out the plan it can be shown that the dormitories will yield a return adequate on the investment, it would, in his opinion, not be improper for the Institute, in one form or another, to take the risk of successfully running them. Between success and failure there was a wide range. Even if it could be shown that the dormitories could be run at a very small loss, the Executive Committee might consider it wise to endure this loss on account of the benefits of having dormitories on the grounds. We should, however, have a very definite idea of the expense of the buildings, maintenance, rent roll, etc., before any definite steps are taken. In the opinion of the speaker a lunch-room cannot be made profitable. He saw no way of raising \$200,000 as a business undertaking. The money must be invested without hope of return.

In conclusion, Mr. Hart said that as treasurer he could view the consideration of the dormitory problem with more hope of solution if provision could be made for the other necessary requirements.

Professor Tyler, who was called upon by the chair, said that he had come to the meeting to find out what could be done on the Walker Memorial. This committee, of which he was chairman, was appointed in 1897 or 98, and practically finished its work in 1900. He said that the committee never expected to raise a sufficient sum for the need. They reckoned on the probability that the \$100,000 raised from the alumni would be met with an appropriation from other sources. A subsequent committee had offered a plan for a Walker Memorial as described in the TECHNOLOGY REVIEW for June, 1913. This plan was reported with optimism on the financial side. The committee had tried to be economical. It had tried to provide a picture of what the Institute ought to have, at a cost of \$225,000, with \$40,000 for equipment, the gym-

nasium and swimming pool to cost \$300,000. He said that he realized that this scale cannot be approached in the near future. To the \$150,000 in the treasury of the Walker Memorial Committee there was a possibility of adding ten or fifteen thousand dollars of uncollected subscription. It was hoped that part of the Fund, recently subscribed, would be applied to the Walker Memorial building, as this was included in the list of objects in the appeal sent out to the alumni. He believed that many would contribute to the Walker Memorial who would not give to the general fund. Dr. Tyler said that he was in sympathy with combining the restaurant and gymnasium with the Walker Memorial as a temporary measure as suggested. A committee of five, appointed in 1913, had considered combining the restaurant with the Walker Memorial, but thought it was undesirable. The general dining-hall was contingent on dormitories, he said. He was in accord with Mr. Hart in the relative order of things necessary for student welfare. He was strong for dormitories, but other things must come first. He differed from some of the other speakers in believing that the demand for meals would not be as great as had been stated. He thought that accommodations for feeding two or three hundred men in the Walker Memorial would be sufficient. He stated he had not been able to confer with his committee and that he was speaking simply as an individual. In answer to a query he stated that the committee had recommended that the Walker Memorial include a large living-room, an auditorium, a library, billiard and pool-rooms, offices for student activities, a grill-room and dining-room, and a small gymnasium. In his opinion the elastic features of the Walker Memorial could be used for other purposes, that is, some of the offices devoted to student activities and the auditorium.

Dean Burton, who was called upon, said that we may miss out if we depend on the alumni and do not carry out plans for student welfare that have been recommended. In his opinion the Institute should be guided in this matter by something other than necessity. The students

have been looking forward and planning for a great improvement of conditions on the new site. They are not anticipating the same kind of lunch-room, but a much greater and better thing. They are looking forward to a chance for larger gatherings in comfortable quarters, for an opportunity for theatrical performances, for better facilities for student activities. In other words, they hope for social club quarters where they can conduct their affairs and invite their friends, a place where they will get a phase of college life which they do not get now. The Dean said that he had met a number of alumni who have sons to be sent to the Institute, and who, in their day, lived in the boarding houses that then existed on Columbus avenue. These fathers were particularly interested in the social side of student life. They did not want their sons to be under the same influences that they were when they were here in Boston. We must give the students something of what they want, on the new site, he said, as failure to do this would affect not only the students and parents, but the public as well. He believed that if the fraternities can be independent on the Technology grounds, they would be glad to locate there.

Charles M. Baker, '78, said that he sympathized with Dean Burton in everything he said. He believed that if temporary buildings were put up that they should be for other things than the dormitories and Walker Memorial.

Lawrence Allen, '07, who was called upon as a representative of the fraternities having made a report in 1913 on this matter, said that there were eighteen or twenty fraternity chapters at the Institute and that nearly 25 per cent. of the student body were fraternity men. The fraternities are now generally recognized as a power for good, he said, and in this respect it is a great change from their status of ten or fifteen years ago. He stated that in his opinion the fraternities will be glad to take such action as will work out to the best interests of the Institute as a whole. It was essential, however, for them to plan for the future, and in order to do so they must know what course the Institute is to pursue

with regard to fraternity accommodations on the new site. Up to the present time no definite information had been given. At a recent meeting of representatives of fraternities with Mr. Munroe's committee matters were discussed fully, and the men present were given a very good idea of what possibly might be done.

A. F. Bemis, '93, chairman of the committee on the housing of students which presented its report in 1913, said that he agreed that certain things are necessities; he would say that the lunch-room obviously came first, and in his opinion it was the duty of the Corporation to provide this. He did not see why the alumni should consider ways of raising money necessary to provide a lunch-room unless perhaps it is to be combined in some way with the dormitories to the advantage of both. As far as the alumni were concerned the Corporation should supply an adequate lunch-room, and also a gymnasium, which is necessary to carry out compulsory gymnasium work prescribed by the Faculty. What interests the alumni particularly is what shall be done at this time in regard to the Walker Memorial and the dormitories. It is true that the war is on us and throws many obstacles in our way, but notwithstanding this the inducement for beginning work on these two objects is so great that, in his opinion, it becomes the paramount work of the association to take it up and complete it by the fall of 1916. He cited as a force that could be made useful to assist, the four or five hundred fraternity members, who by virtue of conditions at the Institute are factors in social life. Many, if not most of them, would come into a satisfactory dormitory scheme, not only willingly but with enthusiasm. If we wait two or three years, some of them may have it still, but the speaker doubted it. Another force is the non-fraternity men. If we delay this matter undoubtedly the result will be that boarding houses will go up in the vicinity which will largely take care of the students. The Institute would then be embarrassed if it started in to compete with them, and it would also be at great disadvantage. There is an opportunity for the Institute to economize as far as present cost is con-

cerned, if spending money is ever economy. He believed that the Walker Memorial committee or Mr. Munroe's committee, or some other committee, should take up the matter of the Walker Memorial and the dormitories vigorously and see what can be done, regardless of the war or other conditions, toward raising \$100,000 or more in order that this matter may be put through now. With a comparatively small addition to our present funds we could put up a satisfactory building for the Walker Memorial with lunch-room and gymnasium sufficient for present needs. Undoubtedly an architect could design it so that it could be made convertible. Various estimates of the sum necessary have been made. Mr. Kebbon's recent guess was \$350,000. It seemed to the speaker that the Corporation could afford to advance funds for the Walker Memorial in lieu of the expenditure it is bound to make in providing for a lunch-room and gymnasium. He suggested that a committee be appointed to look into this matter.

President Maclaurin, who was called on, said that he was impressed with the importance of the dormitories and the Walker Memorial building, and for providing, in the immediate future, for a gymnasium and a lunch-room. This indeed was one of the reasons the Institute had for moving to its new site. He had the pleasure of being present at the meeting of the Technology Clubs Associated re-union in Pittsburgh, and in conversations he found that the older alumni frequently referred to the great lack of social life in the old days. It was the general sentiment that the one great lack at the Institute was that of the human quality. At the Course I luncheon in Pittsburgh a number of suggestions were made along this line. Broad humanitarianism was advocated; a wider course in literature and English to offset the mathematical grind was suggested. Proper social conditions are essential to shape men for the profession of engineers. The older men saw what they had missed. In due time, Dr. Maclaurin said, we are going to do all these things, but we may have to wait. As to this particular problem he agreed

with Mr. Hart that we must have a lunch-room and a gymnasium. He thought that Mr. Bemis was mistaken in his view. The Institute as a whole should be taken into consideration. Anything of interest to the Institute is of interest to the alumni. He hoped that it would be possible to provide for an adequate gymnasium and lunch-room, but the suggestion that the Corporation appropriate fifty thousand or a hundred thousand dollars was out of the question. The Corporation cannot do it, for the Institute hasn't the money. It was suggested that part of the Alumni Fund be set aside for these purposes, as they were given a prominent place in the plea for contributions from the alumni. The Corporation, however, must provide for the essentials first. If \$200,000 were applied to the purposes mentioned, that \$200,000 must be taken from the educational buildings. The President said that the Walker Memorial must either be put up with the money we now have or we must get more. It is up to the Alumni Association to decide whether we can or cannot secure additional funds for this purpose. In regard to the dormitories he felt that we must have them as soon as we can. The Alumni Association should take up this matter more in detail. The report of the Bemis committee of two years ago had become a standard text-book, the President said, on what dormitories should be. To build the dormitories complete some money must be donated. If, however, the dormitories could be maintained on a business basis, then our problem would be easy. The credit of the Institute is good and we could raise the money. He said that he did not want to throw cold water on the suggestion, but it was not an easy problem to solve. The alumni committee would be of great service if it could show that the dormitory investment was good business or even if they could give an indication as to how much must be raised from philanthropists to put the dormitories on a working basis. We do not want to put up dormitories, he said, that we shall be ashamed of in five years. We shall make a great mistake if we let ourselves be stampeded by the condition of

the times into doing something we shall regret in the future. On the other hand, the worst thing we could do would be to sit still and do nothing. The discussion of the matter here tonight will indicate to the committee which will be set up, what is practical to do.

In conclusion Mr. Munroe said that Dr. MacLaurin had expressed the matter exactly. The committee did not feel warranted in going into facts and figures until they felt that they had the backing of alumni opinion. If the committee has it, it will take up the matter actively and try to suggest suitable accommodations, worthy of the Institute, as well as a scheme of financing that will appeal to the Corporation on the one hand and the alumni on the other. This will cover the cost of construction, the maintenance and revenue. Mr. Munroe asked President Horn for an expression from the Alumni Council as to whether or not the general suggestions made by his committee were approved; thereupon the Council expressed its approval by formal vote.

### A Recognition from England

The *Technical Journal* is the official organ of the Association of Teachers in Technical Institutions in Great Britain. That *Journal* is publishing from time to time a series of articles on famous technical schools. The number for January, 1915, is devoted to a description of the Massachusetts Institute of Technology. The editorial comment on this article contains the following:

"It is with much satisfaction that we are able to include in this issue of the *Journal* a description of the well known Massachusetts Institute of Technology. Many of the facts recorded in this article cannot but arouse feelings of envy in the minds of English technical teachers, and there are many other features of the Institute not included in the article which would increase these feelings. For example, one of the great fears of the authorities of the Institute is that the school may grow too big. To prevent this, there is not only an entrance examination of a high standard, but after entrance there is continual weeding out of those students

who do not display the requisite ability and application. At various intervals students are examined and their work passed under review. If it is found to be unsatisfactory and if there is insufficient improvement subsequently, the student is required to withdraw. Partly, no doubt, because of the high standard thus established and partly because of the fact that close relations with industry are maintained, the Institute is very highly regarded amongst employers and the demand for the trained students of the Institute is always greater than the supply. With the removal to the fine buildings shown in the illustrations to the articles and with the intimate relations which have been established with Harvard University, a still greater future lies before this famous technical college."

### Drop in at Seattle!

We are glad to announce that the Technology Club of Seattle has made arrangements for Technology headquarters in that city during the coming summer, where any Tech man will be made heartily welcome and will be given any information or assistance that he may desire.

Tech headquarters will be at the Anderson Supply Company, 111 Cherry Street, Seattle, Washington; and Maurice P. Anderson, '10, will be in charge and extend hospitality.

In addition to the enterprise of the club in establishing headquarters in the city, a coöperative effort is being made to get hold of all Tech men going to the Panama-Pacific Exposition to at least visit Seattle when on the coast; and a committee has been formed to see that they are entertained and assisted in every way possible.

The names of those on this committee are Leonard T. Bushnell, '05, chairman, Seattle National Bank Building; M. P. Anderson, '10, Anderson Supply Company, 111 Cherry Street, Seattle; C. N. Lewis, '99, 317 Pacific Block.

The location of headquarters is a central one, being in the district of the railway and steamship offices and is very easy of access.

# WESTERN UNION

# TELEGRAM

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TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA ANNOUNCES THAT REGULAR MONTHLY DINNERS WILL BE HELD AT THE UNIVERSITY OF CALIFORNIA CLUB 221 STOCKTON ST SANFRANCISCO THE SECOND TUESDAY OF EVERY MONTH DURING THE EXPOSITION THE PRICE OF THE DINNER WILL BE ONE DOLLAR INCLUDING CALIFORNIA WINE ALL TECH MEN CORDIALLY INVITED TO ATTEND A REGISTER FOR VISITING TECH MEN WILL BE FOUND AT THE EXPOSITION PALACE OF EDUCATION MASSACHUSETTS BOOTH AND TECH MEN ARE ASKED TO REGISTER INFORMATION REGARDING LOCAL TECH MEN CAN BE ALSO OBTAINED THERE RELIABLE INFORMATION REGARDING TOTAL ACCOMMODATIONS CAN BE OBTAINED BY CALLING OR ADDRESSING HOTEL BUREAU AT 702 MARKET ST SANFRANCISCO

G E ATKINS

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## Daily Luncheon at Portland, Ore.

The Technology Association of Oregon held another interesting meeting on January 22, at the Oregon Hotel grill. At this meeting Robert S. Edwards, '02, was elected president to succeed H. B. Hastings, '07, who is now taking a special course at Harvard.

The matter of a meeting of the Pacific Technology Clubs Associated in San Francisco was discussed, and the association is heartily in favor of this move and will support it.

It was voted to reserve a table at the Hazelwood Luncheon every noon so that Tech men might go there any noon in the week and find congenial companionship. If this plan develops, Tech men passing through Portland will always know where to find friends.

## Mr. Carb Joins the Red Cross Forces

Mr. David Carb, instructor in English at the Institute and a graduate of the Harvard class of 1909, has obtained a half-year's absence, and has enlisted with the American Ambulance Corps, for duty as chauffeur on European battlefields.

Mr. Carb has had no experience as an automobilist until a short time ago when, having decided to take a hand in the war, he began practicing at the wheel and has become proficient.

While at Harvard he was an organizer and active member of the Harvard Dramatic Club, and since that time he has devoted much attention to dramatic productions and is author of several plays.

Alumni Night, Tech Show, April 16.

## Tech and Pure Food

The recently discussed advisory relations on the part of the Massachusetts Institute of Technology to the Commonwealth are now set forth in a very practical way in a pure food exhibit that is to be presented by the Institute to the Industrial Accident Board. This was inspected and approved by President MacLaurin and Professor H. P. Talbot, head of the department of chemistry. The planning and assembling of the various items has been the work of Associate Professor A. G. Woodman, of the Food Analysis Laboratory and many of the features are original with his department.

The Industrial Accident Board of Massachusetts has undertaken the establishment of a "Safety First" museum. It is intended that this shall be a clearing house of information concerning the safeguarding of life and limb in industry and in health promotion and welfare work. Incidental to this came the question of food for industrial workers, and Secretary Holman of the board applied to Technology for aid in establishing a food products exhibit. This is precisely in the line of work of a division which includes the Food Analysis Laboratory, in which Technology has in the past accomplished fundamental work. It was in related branches that Mrs. Ellen H. Richards carried forward the investigations that have made her name famous among the women of the country. For some years previous to her death, however, her energies were devoted to water analysis and the food analysis went into other hands. Professor Woodman is a graduate of Tech, who since getting his degree has been connected with the department of chemistry, first as assistant, then instructor in sanitary chemistry and since 1908 as assistant and then associate professor of food analysis.

The exhibit is designed to illustrate the composition of typical food materials, the proper choice of food substances so as to afford a maximum of nutrition, some illustrations of good and offensive methods of handling food and some examples of how labels may be made to appear what they are not.

The exhibit includes an oak cabinet with charts illustrating the nutritive value of typical and important food materials. This system of charts is considered to be more advantageous than the older method of bottles or papier maché models. There is next a set of larger charts illustrating by tables the relative economic value of different dietetics. A number of comparisons are here made among them, charts of the heating value, fat content, etc., of a pound of the various substances. Here is given the menu that can be had for twenty-four cents a day for one person and a still more interesting one that will cost only ten cents.

The showing of conditions under which food is produced is by photographs largely from Indiana, where a recent survey by the state authorities has given a wealth of such material. The fourth item is a set of 140 lantern slides for use in educational work. They have the advantage of evolution through practical experience in teaching at the Institute and are so arranged as to be subdivided into groups. Lectures have been prepared about the groups and these can be given with but little preparation, if necessary, by teachers, members of clubs, ministers or others more or less accustomed to speaking to companies or classes.

The whole showing has its importance in the clear way in which it sets forth that most important factor to the well-being of the industrial employee, good, nutritious, inexpensive food. The exhibit which has cost some hundreds of dollars to assemble and prepare is to be the gift of Technology to the State.

## The President in Cleveland

On Tuesday, February 23, President MacLaurin was the guest of the Cleveland Chamber of Commerce at a luncheon, and addressed the Chamber on "Some good things that may come from the War." Forty-five Cleveland Tech men were on hand and pulled off a hearty Tech cheer when he was introduced. Following the luncheon an informal reception was held for the Technology men.

### The President at Indianapolis

With the waving of palm branches and the "cooing" of doves of peace, the hatchet was appropriately buried in a pile of sand at the University Club last night on the occasion of the first annual banquet of the Indiana Association of the Massachusetts Institute of Technology. The peace ceremonies celebrated the recent amalgamation of the Harvard engineering courses with those of the school of Technology.

The honor guest of the evening was Dr. Richard C. Maclaurin, president of M. I. T., who spoke on "The Allies." Dr. Maclaurin said that in view of present conditions abroad it was usual to speak in warlike terms, but that his talk had only to do with the alliance which had been effected between M. I. T. and Harvard. He explained to the alumni the details of the plan which has combined certain branches of the two schools in Technology's new \$6,000,000 plant, which, he said, was a decided advantage for both participants.

"The combination of Harvard and Technology," said Dr. Maclaurin, "is part of a coöperative movement which is extending to educational institutions in all parts of the country. This has followed a gradual extension of the work, which finally resulted in the overlapping of courses, much duplication and needless waste."

The speaker referred to the agitation regarding a merger of the two Indiana universities but asserted that the question was purely local and that he did not know whether the special fitness of the other combine was evident here. Dr. Maclaurin said that in his world travel he had found in no country even a part of the interest which alumni in America manifest in their institutions. To this he attributed in part the success of the universities here.

He pointed out that alumni, wrongly, he thought, seemed to feel that they owned the university and that it existed solely for them. In merging Harvard and Technology, he said, the only thing to be lost would be the sense of exclusive ownership.

Dr. W. E. Stone, president of Purdue University, spoke on "Engineering Education in State Universities." He said that a slight decrease in the enrollment of engineering courses was fortunate in that it marked the end of a kind of fad which now was evident in the agricultural departments.

He spoke of the handicaps which a state university encountered in graduating engineers fitted more to make a comfortable livelihood rather than those who appreciated the high problems of the engineering profession. He favored the establishment of graduate schools of engineering, of engineering experiment and extension departments and spoke of the tendency of the state to depend upon the university for help in solving state engineering problems.

Rose Polytechnic Institute was represented by John White, vice-president of the institution, and the Indiana-Harvard Club by President Thomas C. Howe of Butler College. In his remarks Dr. Howe expressed the hope that Indiana and Purdue would not be merged, saying that he believed they could accomplish more if allowed to act independently.

J. Lloyd Wayne was toastmaster. Members of the association provided their own "stunts" in mouth harp selections and monologues by Drs. Turner and Davis of Purdue. The banquet hall was appropriately decorated with American flags and pennants and the guests were given miniature hatchets and cherry twigs.—*Indianapolis Star*, February 23.

### Experience Meeting at Detroit

The annual meeting of the Detroit Association was held February 3, at the Edelweiss Café, when the following officers were elected: President, W. R. Kales, '92; vice-president, George R. Anthony, '98; secretary, D. V. Williamson, '10. Twenty-seven members were present.

The toastmaster, H. I. Lord, '98, called upon each man in turn to get up and tell briefly what he had done since leaving the Institute. This proved to be very entertaining and instructive. Everybody joined in singing Tech songs around the piano.

### Technology Club of New York

**BUSINESS DIRECTORY.**—A new edition of the Club Business Directory is in course of preparation and will be issued during the next two months.

**THE RELAY TEAM IN NEW YORK.**—The members of the T. A. A. Relay Team have been invited to be the guests of the club on their way to Georgetown and on their visit to New York for the I. C. A. A. meet on March 6.

**BOSTON NIGHT AT THE CLUB.**—February 18 was Boston night at the club, and the New England party en route for Pittsburgh was met by a delegation at the Grand Central Station, escorted to the clubhouse and entertained with appropriate ceremonies during the evening.

**REPRESENTATIVE ON ALUMNI COUNCIL.**—At the February meeting of the Board of Governors, R. H. Howes, '03, was chosen as the New York representative on the Alumni Council.

**PICTURES FOR THE POOL ROOM.**—Additional pictures for the pool and billiard room are desired by the House Committee and group pictures of Technology organizations, past or present, will be received with appreciation and handed on to the admiration of coming generations.

**DECORATION OF THE STEIN ROOM.**—The decoration of the Stein Room is going forward rapidly. Friezes running along the two ends of the room and illustrating the customs and manners of our mascot, the beaver, in his native habitat, as well as three panels representing Chemistry, Architecture and Engineering, are the work of Frederick T. Weber of the Beaux-Arts; and Mr. Weber is now at work at a larger panel representing the Spirit of the Stein Song. A large panel by I. B. Hazelton, '97, set in an alcove at one end of the room, represents Art and Science and is considered by experts to be one of the cleverest pieces of mural painting in America.

**DECEMBER SMOKERS.**—Special smokers were held during the month of December as follows: December 8, Class night, 1868-1884 and 1905-

1909; December 15, Architect's night; December 22, Class night, 1900-1904 and 1884-1894; December 25, Christmas festivities.

**ANNUAL DINNER.**—The annual dinner on January 30 was for the first time a home affair. One hundred and thirty-six members gathered at the clubhouse and disproved the saying that too many cooks spoil the broth, by sitting down all in cap and apron and enjoying an excellent beefsteak dinner. Speechmaking was sternly suppressed, only McKim, '86, and Horn, '88, being allowed even to try—and it was a foregone conclusion that they were not likely to succeed. An excellent vaudeville performance was provided by the "Brooklyn bunch" and after adjournment to the Stein Room, Lester Gardner, '98, and Ben Hurd, '96, sold a large share of the panels which still remain unclaimed.

### Alumni Meeting at Dayton

Members of the Technology club, composed of graduates of the Massachusetts Institute of Technology, of Boston, had a dinner last night at the Dayton club in honor of I. W. Litchfield of Boston, field manager of the alumni association of the Institute.

During the evening Mr. Litchfield spoke of the meeting of the Technology Clubs' Associated at Pittsburgh, February 19 and 20, which he said was the greatest gathering of technical men he had ever seen.

Mr. Litchfield also discussed the new building being erected by the Institute at Cambridge. Walter G. Wuichet is president of the local association, City Manager Henry M. Waite, vice-president, and Edward C. Wells, secretary.

Participating in the dinner were Manager Waite, Service Director J. E. Barlow, Frank B. Heathman, Edward C. Wells, Walter G. Wuichet, R. W. Chandler, C. H. Spiehler, M. J. Gibbons, Jr., Warren Kiefaber, F. A. Pretzinger, H. B. Canby, Lovett D. Custer, D. A. Kohr, Ernest M. DeWitt, Kenneth Grant, J. H. Kimble and Carleton D. Putnam.—*Dayton Herald*, February 23.

### Rare Books for M. I. T.

The Baldwin Engineering Library, deposited with M. I. T. by the Woburn Public Library, forms an important acquisition to that institution.

The books remain the property of the Woburn library, but from a desire that the splendid sets of books may have wider value, the Woburn authorities have placed them where they will supplement a library already one of the foremost in the world in civil engineering. The Baldwin books have rare association in addition to their intrinsic value. There are here volumes that belonged to the original Loammi Baldwin of Woburn, "the father of civil engineering in America," schoolmate of Count Rumford, friend of George Washington and a power in the land at a time when civil engineering had not yet been differentiated from general science.

Loammi, his son, carried on his father's great works, was the engineer of the Mill Dam in Boston, the great Union Canal in Pennsylvania, and was the authority delegated by Massachusetts to report on the possibility of a canal from Boston to the Hudson, in connection with which the idea of piercing the Hoosac Mountains with a tunnel was first broached. The younger Loammi is popularly known from the drydocks of Charlestown and Norfolk and from being foremost adviser on the Bunker Hill Monument. Two brothers, James F. and George R., added to the richness of the library.

It came by inheritance to Mrs. C. R. Griffith, daughter of George R. and she presented it, in 1899, to the Woburn Public Library.

### Broadening University Extension

At a recent meeting of the heads of institutions of higher learning in Massachusetts, the broadening of the university extension system, which has been in vogue the last two years between Harvard and Technology and two or three other institutions, was discussed. Various forms of increased public service by colleges, universities and technical schools were taken up and four standing

committees were appointed as follows: On university extension for eastern Massachusetts, on university extension for central and western Massachusetts, on systematizing expert service to the state and municipalities, on coöperation in special training of persons wishing to be teachers. President MacLaurin of the Institute is chairman of the committee systematizing expert service to the state and municipalities. This is directly in line with the investigation that the Alumni Association made last year with reference to the coöperation of educational institutions with the State, and an immense fund of valuable information and suggestions are ready at hand for the use and the guidance of this committee.

### Good Meeting in Cincinnati

The local Alumni Association of the Massachusetts Institute of Technology had a luncheon at the Business Men's Club at noon yesterday, bringing together the local "Tech" men to meet I. W. Litchfield, who is here with Professor Richards, from Pittsburgh, where they attended the annual meeting of the Associated Alumni Clubs of Technology on Friday and Saturday of last week.

Mr. Litchfield gave a talk on the work being done at the Institute and of the progress being made on the new layout of buildings that are being erected along the Charles River Esplanade, which, when completed, will be as fine as any large group of college buildings in the country.

He also explained how effective the work of the local alumni associations have been, and that other colleges have been adopting the system used by the Institute. Mr. Litchfield will stop at Dayton on his way back to Boston, where he will address that association.—*Cincinnati Enquirer*, February 23.

### NOTICE

Alumni Night at Tech Show, Saturday evening, April 17

See notices later

## Why Some Associations are Prosperous

It is interesting to know that although the payment of dues to the association has dropped off slightly for January, owing undoubtedly to the general financial conditions, the number of sustaining members has kept pace with last year, which means that the Alumni Association will be enabled to continue its general line of development without interruption. It is interesting to note that local alumni associations are beginning more and more to follow this example in order to get on a successful basis; and it is found to be a fact that there are a number of men in each community who cannot give much personal effort but who are glad to be of aid by contributing as guarantors or sustaining members.

One of the secrets of the success of the Pittsburgh club has been the guarantors' association, and this feature has proved to be so definitely beneficial, that the number of guarantors increases each year, and the club has drawn within its active working body practically every Tech man within the Pittsburgh district.

Recently the Technology Club of Rhode Island has adopted the same policy. A number of men in the Providence district have subscribed to a sustaining membership of ten dollars each, and as a result of this and of active secretarial work, the Providence club has become a strong center of Tech interest, where a few years ago there was comparatively little activity.

The members of the Philadelphia club are also arranging for a sustaining membership and have been assured of generous assistance.

## To Form Engineers Club in Duluth

The members of the Technology Club of Lake Superior, residing in and about Duluth, held their annual dinner at the Kitchi Gammi Club February 6. At this dinner the lack of engineering and technical reference books in the Duluth Public Library was discussed, and it was decided to ask the coöperation of other engineering societies in an effort to obtain important books in this line.

Through the efforts of the club it is expected that an engineering club will be formed, which will take in all the members of the profession in the Superior region.

Following the banquet and talks, the members of the club elected Samuel B. Sheldon, '89, president; Walter G. Zimmerman, '98, vice-president; and Floid M. Fuller, '06, secretary-treasurer. These, together with Charles Brewer, '02, and William Peyton, '90, comprise the executive committee. A college committee was appointed, and W. C. Lounsberry, '04, Carroll Steele, '08, and E. P. Alexander, '14, were selected to arrange the program for the annual college celebration next summer.

## The Trip of the Musical Clubs

The trip of the Musical Clubs, held during the mid-year vacation, was a very successful one, and everywhere the alumni turned out in force and did everything possible to make the visiting undergraduates enjoy their stay.

The attendance at Montclair was certainly surprising; for it is not a large local center for Tech men. In Philadelphia about two hundred attended the concert and dance; at Butler, Pa., and Washington, Pa., entertainment was provided by the friends of the members of the clubs, and at Rochester and Springfield the alumni were especially active in giving the boys a good time.

## From One Tech to Another

The Institute has recently received a handsome hand-colored memorial expressing the heartiest congratulations from the principal, professors and students of the Manchester Municipal School of Technology: "To our great sister institution across the seas on the completion of one hundred years' peace and cordial understanding between the two peoples, 1814-1914." The Manchester school ranks very near the top among the technical institutions in Great Britain and is distinctly a municipal undertaking as its Board of Government is a committee of the aldermen and council.

### Smoker and Dutch Luncheon

The Washington Society of the Massachusetts Institute of Technology gave a smoker and Dutch luncheon last evening at the University Club. A special feature of the meeting was the presence of I. W. Litchfield, '85, field manager of the Alumni Association, who came on from Boston for the occasion.

Mr. Litchfield told of the progress being made on the new Institute buildings, now under construction at an estimated cost of \$6,000,000. Details of the working arrangement between the Institute and the Lawrence Scientific School of Harvard, whereby each obtains the advantage of the other's equipment and the specialists on their respective instructing staffs, thereby preventing unnecessary duplication of expensive equipment and giving the students of both institutions the inspiration of having as professors men of recognized authority in their respective fields, was also explained. A large number of the local alumni was present.—*Washington Evening Star*, February 9.

### Medal Offered by Aero Club

Professor C. H. Peabody, head of the Department of Naval Architecture at the Institute, had been notified by the Aéro Club of America of the establishment of a medal for the students at the Institute. It is to be called the Aéronautical Engineers Medal and is to be awarded annually for merit, to students in the graduate course in that department.

The relations of the Aéro Club of America towards this new course at the Institute are very close, and are likely to become stronger. The club is one of great influence, and recognizing the value of the research that the Institute has started out to perform, it is doing everything it can to be of assistance.

### Tech Men of Detroit

Twenty-one members of the Detroit Alumni Association of the Massachusetts Institute of Technology, participated in a

dinner and social time at the Edelweiss café Tuesday night.

I. W. Litchfield, field manager of alumni clubs, spoke entertainingly of what other associations are doing.

The next meeting of the association will be held March 19, when there will be a joint gathering with the Detroit Engineering society. Professor Gill, of the Massachusetts Institute of Technology, will then be the speaker.—*Detroit Free Press*, February 24.

### President Horn Visits Buffalo

The Technology Club of Buffalo had a very successful meeting on February 23, when Mr. Henry Horn, '88, gave us all the latest news about the New Technology and the Pittsburgh reunion.

Mr. Horn is very enthusiastic in regard to the future of the Institute and imparted the excess enthusiasm into our club along with loads of good fellowship.

The men who were unable to go to Pittsburgh almost believed they had been there after hearing Mr. Horn's description of the doings. We all feel that we must attend the next annual meeting, and here's hoping we do.—*H. M. Cowper*, '05, *Secretary*.

### Death of Ross S. Turner

Word was received at the Institute February 13, from the Bahama Islands, telling of the death of Ross S. Turner, a well-known Boston and Salem artist, who has been connected with the department of architecture at the Institute for about thirty years. The loss to the department is severe, as he occupied a place that will be difficult to fill. An appreciation of Mr. Turner's work will be given in the April number of the TECHNOLOGY REVIEW.

### Another Tea Kettle

The *Ninety Tea Kettle*, which is a very warm publication of the class of 1890, has reached volume I, number 2; this second number being largely devoted to the big twenty-five-year reunion, which will be postponed until 1916, because of the postponement of the all-Technology reunion.

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